Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A device for generating images and/or projections by means of an imaging method, which device includes a device for the detection of input radiation which includes at least one acquisition element which comprises a sensor with a Pr^{3+}-activated scintillator for converting the input radiation into UV radiation, a color converter which contains a luminous substance for converting the UV radiation to an optical signal, and a photodiode which converts an optical signal into an electrical signal; wherein the Pr^{3+}-activated scintillator is chosen from the group LuF_3:Pr, $LuCl_3$:Pr, and $LuBr_3$:Pr.

2. (Previously presented) A device for generating images and/or projections as claimed in claim 1, wherein the group further includes $(Lu_{1-x}Y_x)Si_2O_7$:Pr, where $0 \leq x \leq 1$.

3. (Previously presented) A device for generating images and/or projections as claimed in claim 1, wherein the device is arranged to carry out the PET method as the imaging method.

4. (Previously presented) A device for generating images and/or projections as claimed in claim 1, wherein the device is arranged to carry out the SPECT method as the imaging method.

5. (Previously presented) A device for generating images and/or projections as claimed in claim 1, wherein the device is arranged to carry out the imaging method by means of X-rays.

6. (Cancelled)

7. (Previously presented) A device for generating images and/or projections as claimed in claim 1, wherein the color converter comprises a polymer light guide which is doped with the luminous substance that is excited by UV radiation.

8. (Previously presented) A device for generating images and/or projections as claimed in claim 1, wherein the color converter comprises a polymer light guide and a separate layer with the luminous substance that is excited by UV radiation.

9. (Currently amended) A device for the detection of input radiation which includes at least one acquisition element which comprises a sensor with a Pr^{3+}-activated scintillator for converting the input radiation into UV radiation, a color converter that converts UV radiation to an optical signal, and a photodiode which converts the optical signal into an electrical signal, wherein the color converter includes a polymer light guide and the color converter is doped with a Courmarin based substance.

10. (Previously presented) A device for detecting input radiation as claimed in claim 9, wherein the color converter contains a luminous substance which can be excited by UV radiation, wherein the color converter is arranged between the sensor and the photodiode.

11. (Previously presented) A device for detecting input radiation as claimed in claim 9, wherein the acquisition element comprises an array of photodiodes, and further wherein the array of photodiodes forms a first layer and the sensor forms a second layer, wherein the first and second layers are combined to form a system of layers.

12. (Previously presented) A device for detecting input radiation as claimed in claim 9, wherein a decay time of the scintillator is approximately 9 ns.

13. (Previously presented) A device for detecting input radiation as claimed in claim 9, wherein a decay time of the scintillator is approximately 16 ns.

14. (Previously presented) A device for detecting input radiation as claimed in claim 9, wherein the Pr^{3+}-activated scintillator is $Ca_{1-2y}Li_2SiO_4:Pr_yNa_y$, where $0.001 \leq y \leq 0.2$.

15. (Previously presented) A device for detecting input radiation as claimed in claim 9, wherein the Pr^{3+}-activated scintillator is $LaPO_4$:Pr.

16. (Previously presented) A device for detecting input radiation as claimed in claim 9, wherein the Pr^{3+}-activated scintillator is one of $LuCl_3$:Pr, $LuBr_3$:Pr, $(Lu_{2-x}Y_x)SiO_5$:Pr, where $0 \leq x \leq 1$, and $(Lu_{1-x}Y_x)Si_2O_7$:Pr, where $0 \leq x \leq 1$.

17. (Currently amended) An imaging method, comprising:

receiving one of an X-ray and a γ quantum at a Pr^{3+}-activated scintillator, wherein the Pr^{3+}-activated scintillator is one of $LuCl_3$:Pr, $LuBr_3$:Pr, $(Lu_{2-x}Y_x)SiO_5$:Pr, where $0 \leq x \leq 1$~~, and $(Lu_{1-x}Y_x)Si_2O_7$:Pr, where $0 \leq x \leq 1$~~;

receiving UV radiation emitted from the scintillator at a color converter in response to receipt of the one of the X-ray and the γ quantum;

receiving a light signal emitted from the color converter at a photodiode;

generating an electrical signal in response to receipt of the light signal; and

generating an image based at least in part upon the generated electrical signal.

18. (Previously presented) The imaging method of claim 17, wherein the color converter includes a polymer light guide that is doped with a luminous substance.

19. (Previously presented) The imaging method of claim 17, wherein the color converter includes a polymer light guide and a separate layer with a luminous substance.

20. (Previously presented) A device for generating images and/or projections as claimed in claim 1, wherein the luminous substance includes an organic material.

21. (Currently amended) The device for detecting input radiation as claimed in claim [[9]]

17, wherein the color converter is doped with a Courmarin based substance.